# Isolation of Quinupristin-Dalfopristin-Resistant Enterococcus faecium from Human Stool Specimens and Retail Chicken Products in the United States

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**Background**: Quinupristin-dalfopristin (Q/D) is a newly, developed streptogramin antimicrobial agent for the treatment of vancomycin-resistant Enterococcus faecium infections in humans. Although Q/D is the first streptogramin available for human use in the United States another streptogramin (virginiamycin) has been used since 1974 to promote growth in chickens. We wondered if Q/D-resistant E. faecium might already be present in chickens and humans in the United States.

**Methods**: Between July and December 1998, laboratories in Georgia, Maryland and Oregon used enterococcal selective media (CNA agar) and Ford agar supplemented with arabinose, Q/D and ampicillin (Q/D-resistant selective media) to culture human stools and chickens purchased from grocery stores. Enterococcal isolates were forwarded to CDC for species identification and antimicrobial susceptibility testing using broth microdilution.

**Results**: Enterococci were isolated from 84 (56%) human stools, using CNA agar. Isolates from 61 stools were tested further; 17 (28% ) were E. faecium, and two (12% ) of these were Q/D-resistant. No Q/D-resistant E. faecium was isolated from human stools with Q/D-resistant selective media. Enterococci were isolated from 119 (79%) chickens using CNA agar. Isolates from 50 were tested further; two (4%) were E.faecium, and one was Q/D-resistant. With Q/D-resistant selective media, enterococci were isolated from 132 (88%) chickens. Isolates from 64 were tested further; 36 (56%) were E. faecium, and 35 (97% ) of these were QID-resistant.

**Discussion**: Q/D-resistant E. faecium was isolated from human stools and a high proportion of chickens from grocery stores in the United States. Studies in Europe have demonstrated that virginiamycin use in poultry promotes emergence and dissemination of Q/Dresistant E. faecium in humans. Recently, the European Union prohibited growth promotion use of virginiamycin in food animals. Continued use of virginiamycin in food animals in the United States may compromise the effectiveness of Q/D in humans.

**Suggested citation**:

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